

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 71724PC/JR	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/SE2004/000773	International filing date (day/month/year) 19-05-2004	Priority date (day/month/year) 30-06-2003
International Patent Classification (IPC) or national classification and IPC A01J 5/007		
Applicant DeLaval Holding AB et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 4 sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand 07-01-2005	Date of completion of this report 26-09-2005
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Peder Gjervaldsaeter/MN Telephone No. +46 8 782 25 00

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE2004/000773

Box No. I Basis of the report

1. With regard to the language, this report is based on:

- ☐ the international application in the language in which it was filed
- ☐ a translation of the international application into _____
which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1 - 14 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* 1 - 4 received by this Authority on 2005-08-29
- pages* _____ received by this Authority on _____
- ☒ the drawings:
- pages 1 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE2004/000773

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-21</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-21</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-21</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

The claimed invention

The claimed invention relates to the problem concerning implementing remote controlling of automatic milking systems. The problem is solved by creating web documents containing information obtained at the milking station and transmitting these documents to the system supervisor. The supervisor can then, based on the received information determine an appropriate action by remote controlling the milking stations.

Prior art

In the International Search Report the following documents were cited:

- D1: WO 9930277
- D2: WO 0197556
- D3: WO 9951083
- D4: US 2002124803
- D5: EP 1212936
- D6: EP 1212938

D1 describes a system for remote supervising an automatic milking system. The animals are in D1 monitored by cameras. The person supervising can detect problems by watching the images transmitted from the stables to the remote control site. The supervisor can also be alerted by an alarm signal generated by the system. The supervisor can then as a response to the detected problem perform suitable actions in the stable through the internet. (See page 3, line 27 - page 4, line 4; page 4, line 20-22; page 12, line 1-22.)

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of: BOX V

D2 describes a network based sensor system, in which a user can monitor sensed information by logging in to an internet web page. In the web page information gathered by the sensors is showed. A dairy farm is given as an example of systems that can be supervised. (Se page 1, line 8-10; page 6, line 29 - page 7, line 14; page 14, line 17-20; claim 1; figures 1B and 3.)

Documents D3-D6 represent the prior art. The claimed invention is not considered to be anticipated by these documents.

Statement of reason

None of the cited documents shows a supervision system, in which an arbitrary mobile communications unit is used for receiving customised information and for inputting settings for the system.

The cited documents represent the general state of the art. The invention defined in claims 1-21 is not disclosed by any of these documents.

The cited prior art does not give any indication that would lead a person skilled in the art to the claimed automatic milking remote supervision. Therefore, the claimed invention is not obvious to a person skilled in the art.

Accordingly, the invention defined in claims 1-21 is novel and is considered to involve an inventive step. The invention is industrially applicable.

Amended Claims

1. A method for remote supervision of an automatic milking system (1) being adapted to handle animals and comprising at least one milking station (2) and computer means characterised
5 in that said method comprises the steps of

obtaining information about said milking station (2) and/or said animals from said computer means,

creating web-documents containing the obtained information about said milking station (2) and/or animals,

10 establishing a connection between the automatic milking system (1) and a mobile communication unit (8), and

transmitting created web-documents to the communication unit (8), and

15 customizing said web-documents to the mobile communication unit (8) before transmitting it to the mobile communication unit (8), and

20 that the computer means in said automatic milking system (1) receives specific instructions from the communication unit (8) input by a user of the communication unit (8) by means of a user interface, whereby settings of said milking station (2) can be remote manipulated by means of said communication unit (8).

2. The method as claimed in claim 1, characterized in that said step of creating a web-document comprises using a web-server (10) including a program for creating web-documents.
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3. The method as claimed in claim 1 or 2, characterized in that the step of customizing web-documents consists in one or more of the following steps: sending only requested information, sending only predetermined information, sending information in dependence on the capacity of the communication unit (8).
30

4. The method as claimed in any of the preceding claims characterized in the further step of receiving input(s) from the communication unit (8).

5 5. The method as claimed in any of the preceding claims characterized in that the establishment of a connection between the automatic milking system (1) and the communication unit (8) is initiated either from the communication unit (8) or the automatic milking system (1).

10 6. The method as claimed in claim 5, characterised in that the connection between the automatic milking system (1) and the communication unit (8) is established upon the occurrence of a certain event.

15 7. The method as claimed in any of the preceding claims characterized in that said mobile communication unit (8) is selected to be any of the group: laptop computer, PDA or mobile telephone (8).

20 8. The method as claimed in any of the preceding claims, characterized in that said computer means comprises two or more computers handling different functions in the automatic milking system (1).

25 9. The method as claimed in claim 8, characterized in that a first computer comprises a database including information about the herd being handled by the automatic milking system (1), and another computer handles the functions of the automatic milking system (1).

30 10. The method as claimed in any of the preceding claims, characterized in that said automatic milking system (1) includes at least one camera (11) for enabling the sending of images of the at least one milking station (2) and/or animals to a communication unit (8).

11. A system for remote supervision of an automatic milking system (1) being adapted to handle animals and comprising at least one milking station (2) and computer means characterised in that the system includes means (10) for creating web-
5 documents containing information about said milking station (2) and/or said animals obtained from said computer means, means for establishing a connection between the automatic milking system (1) and a mobile communication unit (8), and means (10, 6) for transmitting created web-documents to a com-
10 munication unit (8), and means for customizing said web-documents to the mobile communication unit (8) before transmitting a created web-document to the mobile communication unit (8), and the computer means in said automatic milking system (1) receives specific instructions from the communica-
15 tion unit (8) input by a user of the communication unit (8) by means of a user interface, whereby settings of said milking station (2) can be remote manipulated by means of said communication unit (8)...

12. The system as claimed in claim 11, **characterized in** that said means (10) for creating a web-document comprises a web-server including a program for creating web-documents.

13. The system as claimed in claim 12, **characterized in** that the means for customizing comprises means for performing one or more of the following: sending only requested information, sending only predetermined information, sending information in
25 dependence on the capacity of the communication unit (8).

14. The system as claimed in any of claims 11-13, **characterized in** that said mobile communication unit (8) is any of the group: laptop computer, PDA or mobile telephone (8).

15. The system as claimed in any of claims 11-14, **characterized in** that said computer means comprises two or more com-
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puters handling different functions in the automatic milking system (1).

16. The system as claimed in claim 15, characterized in that a first computer comprises a database including information about the herd being handled by the automatic milking system (1), and another computer handles the functions of the automatic milking system (1).

17. The system as claimed in any of claims 11-16, characterized in that said system includes a camera (11) for enabling the sending of images of the at least one milking station (2) and/or animals to a communication unit (8).

18. The system as claimed in any claims 11-17, characterized in that the system includes means for establishing the connection between the automatic milking system (1) and the communication unit (8) upon a certain event.

19. The system as claimed in claim 18 characterized in that the establishment of a connection is initiated either from the communication unit (8) or the automatic milking system (1).

20. The system as claimed in any of claims 18-19, characterized in that the connection between a communication unit (8) and the milking station (2) is a wide band connection such as fibre, satellite, (V)LAN, radio or ADSL.

21. The system as claimed in any of claims 11-20, characterized in that the system includes means for receiving input being sent from the communication unit (8).